



Combe South Landfill
Background Investigations
Meeting
 30 July 1984

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LIST OF ORGANIC CHEMICALS FOUND
AT COMBE FILL SOUTH

Volatile Organics

1. Carbon Tetrachloride
2. Heptane
3. Nonane
4. Benzene
5. Toluene
6. M, P, xylene
7. O xylene
8. propyl Benzene
9. Dibromochloromethane
10. 1, 4 Dichlorobutane
11. 1, 2 Dichloroethane
12. Trichloroethylene
13. 1, 1-Dichloroethane
14. Tetrachloroethene
15. Methylene chloride
16. Trans-1-2-Dichloroethene

10 Unknown Volatile Organics

Base Neutral Extracts

1, 4' Dichlorobenzene
Diethyl Phthalate
bis (2-ethylhexyl) Phthalate
Naphthalene

Acid Extracts

Phenols

Metals and Inorganics

Arsenic
Cadmium
Lead
Chlorides
Manganese
Mercury
Chromium
Cyanide
Phenol
Chlorine

Pesticides

Endo sulfan - Alpha

DESCRIPTIONS, HEALTH EFFECTS AND TOXICITY OF SUBSTANCES FOUND AT COMBE FILL.

ORGANICS

Carbon Tetrachloride - a nonflammable colorless liquid used in fire extinguishers and as a solvent for fats and greases in cleaning solutions. Carbon tetrachloride has been linked with liver cancer and is classed by the USEPA as a carcinogen.

338ppb

Exposure may result in central nervous system depression and gastrointestinal symptoms of liver and kidney damage. Nausea, vomiting, abdominal pain, diarrhea, enlarged and tender liver, and jaundice result from liver damage. Diminished urinary volume, red and white blood cells in the urine, albuminuria, coma, and death may result from acute kidney failure. Systemic effects worsen when used in conjunction with ingestion of alcohol.

Heptane -
256ppb

Heptane is a paraffin contained in light petroleum products. Irritates skin, lung and nerves.

Nonane -
252ppb

Nonane is also a paraffin in a liquid form, used as a solvent and irritates skin, lungs and nerves.

Benzene -
11ppb

Benzene is an extremely inflammable colorless liquid obtained by the fractional distillation of coal tars. It is used as a solvent for fats and in the making of lacquers, varnishes, many dyes, and other organic compounds. Benzene is classed as a carcinogen by the USEPA. Benzene may also cause prolonged menstrual bleeding in humans.

Toluene -
13ppb

Toluene is a colorless liquid hydrocarbon generally obtained from coal tars used in making dyes, explosives and saccharin. Toluene is volatile and may be absorbed through the skin, digestive tract or by breathing. Acute exposure results predominantly in central nervous system depression. Symptoms include headache, dizziness, fatigue, muscular weakness, drowsiness incoordination with staggering gait, skin paresthesias, collapse and coma. Toluene is also associated with adverse reproductive effects in humans and may cause prolonged menstrual bleeding.

Xylene -
41ppb

Xylene is a liquid resembling toluene obtained from coal tar and used in dyes and as a solvent. Xylene is known to be a central nervous system depressant and to irritate the lungs.

1,2 Di-chloroethane
or

Ethylene Dichloride -
22ppb

Dichloroethane is an oily toxic liquid used as a solvent and in the manufacture of polyvinyl chloride. Dichloroethane effects the nervous system, respiratory system, heart and liver. Inhalation may cause nausea, vomiting, mental confusion, dizziness and pulmonary edema. Chronic exposure has been associated with liver and kidney damage. There is risk to nursing infants and it is listed as a carcinogen.

Trichloroethylene

or

TCE

46 ppb

- Trichloroethylene is a colorless liquid widely used as an industrial solvent in dry cleaning and as an anesthetic. It is a central nervous system depressant with such symptoms as headache, dizziness, vertigo, tremors, nausea and vomiting, irregular heart beat, sleepiness, fatigue, blurred vision and intoxication similar to that from alcohol. Unconsciousness and death have been reported. Alcohol may worsen the symptoms and the person may become flushed. Addiction and peripheral neuropathy have been reported. It is a known carcinogen.

Tetrachloroethylene
(Perchloroethylene)

100 ppb

- A colorless non-flammable liquid used in dry cleaning. Acute exposure may cause nervous system depression, hepatic injury and anesthetic death. In animals it produces cardiac arrhythmias and renal injury. Symptoms of exposure include malaise, dizziness, headache, increased perspiration, fatigue, staggering gait and slowing of mental ability. It is a known carcinogen.

Methylene
chloride

280 ppb

- (Dichloromethane) is a colorless volatile liquid used as a solvent refrigerant and anesthetic. It effects the central nervous system, causes heart fibrillation and symptoms similar to carbon monoxide poisoning.

Naphthalene

10 ppb

- Naphthalene is one of the principal constituents of coal tar and is used as a disinfectant in moth balls and in the manufacture of dyes and explosives.

Diethyl Phthalate
(ethyl phthalate)

54 ppb

- Used as a solvent and a fixative perfume, a denaturant for alcohol and cosmetics because of its extremely bitter taste irritating to mucous membranes, central nervous system depression when absorbed.

Bis-2 ethyl hexyl
phthalate

90 ppb

- (Dioctyl-sodium sulfosuccinate) A powerful wetting compound used as a laxative. Can cause diarrhea and intestinal bloating.

1,4-Dichlorobenzene

9 ppb

- used in making insecticides, phenol and dyes, engine cleaners and solvents, for resins and lacquers, moth repellants, air deodorants. Concentrates in fats and is highly resistant.

1,1-Dichloroethane

160 ppb

- used in making vinyl chloride and tetraethyl lead. Also an insecticide fumigant and used in paint and varnishes, soaps, in wetting and penetrating agents, in ore flotation. A carcinogen.

OTHER ORGANICS FOUND

Dibromochloromethane

78 ppb

Tetrachloroethane

6 ppb

Propyl. Benzene

11 ppb

1,4-Dichlorobutane

20 ppb

Ethylbenzene

10 ppb

Unknowns 2 at 200 ppb
8 at 10 to 20 ppb

METALS

Arsenic - .02 ppm	A very poisonous element used in insecticides, glass, medicines and dyes. In addition to its high toxicity, arsenic may cause matitis, lung and lymphatic cancer. Cumulative effects include disorders of alimentary tract, nausea, vomiting, diarrhea, dehydration, neuritis and paralysis of wrist and ankle muscles. Symptoms include metallic taste and odor of garlic on breath, burning pain in gastrointestinal tract, vomiting and purging, shock syndrome, coma and convulsions, paralysis and death.
Cadmium - .01 ppm	is a soft metal used in the manufacture of fusable alloys, electroplating and control rods for nuclear reactions. It is a known carcinogen and effects lungs and kidneys.
Lead - .13 ppm	is a poisonous metal used in paints, plumbing and alloys. Toxicity occurs if more than .5 mg/day is absorbed. Lead may impair any part of the nervous system. Lead also effects the kidneys and blood.
Manganese - 9.4 ppm	is a poisonous metal used in numerous alloys which, if ingested over long periods results in muscular weakness, peculiar gait, tremors, central nervous system disturbance and salivation and kidney malfunction.
Chromium - .093 ppm	is a metal used in electroplating and alloys. It is a known carcinogen; symptoms of poisoning are pain, diarrhea, collapse, cramping and death due to kidney failure. It is also associated with lung cancer, lung irritation and skin ulcers.
Cyanide - .07 ppm	Cyanides are the most common and most deadly poisons known. Cyanide also effects the thyroid and has blood and respiratory effects.
Phenol - .16 ppm	is a colorless or light pink solid and dangerous due to its rapid corrosive action on tissues. It is a hazardous substance to skin and eyes. Coma may occur within 30 minutes of skin exposure. Phenol also effects the liver and kidneys.
Chlorine - 106 ppm	is a highly poisonous gas used as a bleaching agent and germicide. Excessive exposure can be fatal.
Mercury - .002 ppm	is a poisonous metal which causes central nervous system breakdown and mental effects, abdominal cramps, increased salivation and kidney malfunction.

PESTICIDES

Endosulfan - 1. ppb	also known as Thioden
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